REMARKS

The examiner rejected Claims 1, 2, 15 and 16 as being obvious over the combination of Bruning (U.S. 2002/0070914 A1) in view of Hayashi (U.S. 2002/0015297 A1) further in view of Yoshihara (U.S. 6,115,016).

The examiner generally stated the teachings of the three references and concluded that it would be obvious to combine the references to achieve at least applicant's independent Claims 1 and 15.

The examiner admits that there is no disclosure in the Bruning reference regarding the relationship between any light guide and the LEDs.

Hayashi discloses a light guide 1 (Fig. 1B) being illuminated by white-light cold-cathode tubes 2, 4 (page 8, paragraph 0133).

Yoshihara discloses a backlight 22 (Fig. 6) for an LCD, where a red, green and blue LED array 7 (Fig. 2) is optically coupled to an edge of the backlight 22. Column 8, lines 13-16, state, "The light guiding plate + light diffusion plate 6 guides the light emitted from each of the LEDs in the LED array 7 to the entire surface thereof and diffuses to the upper surface." Accordingly, Yoshihara teaches combining the RGB components into a diffused homogeneous light across the backlight 22. Yoshihara selectively energizes the RGB LEDs as shown in Fig. 4.

Applicant's invention of Claim 1 has red, green, and blue LEDs optically coupled to respective first, second, and third edges of a light guide, and the light guide includes "light directing elements" to direct the red light to the red pixel areas in the display, direct the green light to the green pixel areas in the display, and direct the blue light to blue pixel areas in the display. This invention is unrelated to any feature of the displays described in the three references. None of the references remotely suggests Applicant's "light directing elements." The examiner has provided no suggestion at all for Applicant's claimed "light directing elements" for the RGB components.

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Hayashi discloses with respect to Fig. 4A (paragraphs 0150 through 0156) that dots 32 are placed on the surface of the light guide 1 to improve the uniformity of the light from the cold-cathode tubes emanating from the surface of the light guide (see the last four lines of

paragraph 0155). Accordingly, Hayashi teaches against the selective light directing elements of Applicant's Claim 1. Yoshihara teaches an array of RGB LEDs along a single light guide edge. Accordingly, Yoshihara could not suggest Applicant's arrangement of a red LED along one edge, a green LED along a second edge, and a blue LED along a third edge. Yoshihara could also not suggest Applicant's "light directing elements."

Accordingly, not only does the combination of cited references not suggest Applicant's invention of Claim 1, but the combination teaches away from Applicant's invention. Accordingly, Claim 1 and its dependent Claims 2-12 cannot be suggested by the combination of the cited references.

Applicant's independent Claim 15 recites a backlight that includes "a light emitting diode (LED) emitting light having a wavelength equal to or less than blue light, said LED being optically coupled to said light guide." The backlight also includes "a plurality of first areas on first said surface of said light guide having a first phosphor material that, when irradiated by light emitted by said LED, generate a red light." The backlight also includes "a plurality of second areas ... having a second phosphor material that, when irradiated by light emitted by said LED, generate a green light." The backlight also includes "deformities formed in said light guide directing light from said LED toward said first surface."

The examiner rejected Claim 15 in view of the combination of Bruning, Hayashi, and Yoshihara, using the same arguments as with respect to Claim 1.

Bruning teaches the use of red, green, and blue LEDs, so could not possibly suggest Applicant's Claim 15. Yoshihara similarly teaches the use of red, green, and blue LEDs. Hayashi teaches the use of cold-cathode tubes 2, 4, which are understood to output white light. Accordingly, the combination of the three references could not possibly suggest Applicant's Claim 15. Accordingly, independent Claim 15 and dependent Claims 16-18 are respectively submitted to be patentable over the combination of the cited references.

The examiner rejected independent Claim 13 as being obvious over the above combination and further in view of Rand (U.S. 6,521,879). Claim 13 recites the method for using the color LCD of Claim 1. Rand teaches strings of LEDs throughout the backlight so could not suggest Applicant's LEDs coupled to the edges of the light guide, as claimed in Claim 13. For this and other reasons, Rand adds nothing of significance to the previously

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described combination of references. Accordingly, Claim 13 and dependent Claim 14 are allowable over the combination of references.

The examiner additionally rejected Claims 10 and 11 under 35 U.S.C. 102(e) as being anticipated by Roberts (U.S. 2002/0191127 A1). The examiner cited Roberts simply for showing limitations in certain dependent claims but not for disclosing the invention in the independent claims. Accordingly, there is no need to distinguish Roberts from the dependent claims since the independent claims have been shown to be allowable.

As seen, all claims are allowable over the references cited by the examiner.

U.S. Patent No. 5,608,554 to Do is disclosed in the accompanying PTO form 1449. This patent teaches a backlight source being a "lamp which includes at least one deep blue emitting phosphor ..." (Column 2, lines 41-42). Accordingly, the "lamp" that includes the phosphor as the backlight source could not possibly be Applicant's claimed (Claim 15) "light emitting diode (LED) emitting light having a wavelength equal to or less than blue light, said LED being optically coupled to said light guide," since Applicant's LED light from the light guide directly irradiates the plurality of first and second phosphor areas on the surface of the light guide without the LED light being first converted by any phosphor, as required in the Do patent. Additionally, the Do patent does not disclose the "deformities" recited in Claim 15. For these and other reasons, Applicant's Claim 15, and the remaining claims, are patentable over the Do patent.

Applicant respectfully requests a Notice of Allowance be issued. If the examiner's next action is other than issuing a Notice of Allowance, the examiner is respectfully requested to Applicant's attorney at (408) 382-0480 to further discuss the case.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on 6/9/, 2003.

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